

What is claimed is:

- 1        1. An audio system comprising:  
2        a first audio source having a plurality of audio channel signals, said plurality of  
3        audio channel signals including a surround channel signal;  
4        a seat having a seat back;  
5        an electroacoustical transducer mounted in said seat back; and  
6        electronic circuitry coupling said first audio source and said electroacoustical  
7        transducer for transmitting said surround channel signal to said electroacoustical  
8        transducer.
- 9        2. An audio system in accordance with claim 1, wherein said seat back comprises  
10       a headrest, and wherein said electroacoustical transducer is mounted in said headrest.
- 1       3. An audio system in accordance with claim 1, wherein said electroacoustical  
2       transducer is mounted along an axis to radiate upwardly from said seat back.
- 1       4. An audio system in accordance with claim 1 and further comprising,  
2       a second electroacoustical transducer,  
3       wherein said plurality of audio channels includes a right surround channel signal  
4       and a left surround channel signal,  
5       wherein said electronic circuitry is adapted to transmit said left surround channels  
6       signal to said first transducer and said right channel signal to said second transducer,  
7       and wherein said first electroacoustical transducer is positioned to one side of a  
8       normal head position of an occupant of said automobile seat,  
9       and said second electroacoustical transducer is positioned to an other side of said  
10       normal head position.

1           5. An audio system in accordance with claim 4, further including signal  
2 processing circuitry for modifying said left surround channel signal and said right  
3 surround channel signal to increase the perceived audible separation between sound  
4 radiated by said first transducer and sound radiated by said second transducer.

1           6. An audio system in accordance with claim 4, further comprising  
2 a second audio signal source, coupled to said circuitry for transmitting audio  
3 signals from said second source to said first transducer and said second transducer.

1           7. An audio system in accordance with claim 6, wherein said circuitry is adapted  
2 to transmit said left surround channel signal to said first transducer in the absence of a  
3 signal from said second source and to mute said left surround channel signal in the  
4 presence of a signal from said second source and wherein said circuitry is further adapted  
5 to transmit said right surround channel signal to said second transducer in the absence of  
6 a signal from said second source and to mute said right surround channel signal in the  
7 presence of a signal from said second source.

1           8. An audio system in accordance with claim 7, wherein said second audio signal  
2 source is a telephone.

1           9. An audio system, in accordance with claim 1, further comprising:  
2 a second audio signal source, coupled to said circuitry, wherein said circuitry is  
3 adapted to transmit signals from said second audio signal source to said transducer.

1           10. An audio system in accordance with claim 9, wherein said circuitry is adapted  
2 to transmit said surround channel signal in the absence of a signal from said second  
3 source and to mute said surround channel signal in the presence of a signal from said  
4 second source.

1           11. An audio system in accordance with claim 10, wherein said second source is  
2 a telephone.

1           12. An audio system in accordance with claim 1, wherein said seat is an  
2 automobile seat.

1           13. A sitting device, comprising:  
2           a back portion having an upper surface; and  
3           an electroacoustical transducer, mounted in said upper surface along an axis and  
4 oriented to radiate substantially upward from said upper surface.

1           14. A sitting device in accordance with claim 13, wherein said sitting device is an  
2 automobile seat.

1           15. A sitting device in accordance with claim 14, wherein said automobile seat  
2 comprises a headrest.

1           16. A sitting device in accordance with claim 14, further comprising a second  
2 electroacoustical transducer mounted in said upper surface along an axis and oriented to  
3 radiate upward from said upper surface.

1           17. A sitting device in accordance with claim 16, wherein said first transducer is  
2 positioned to the left of a user's normal head position and said second transducer is  
3 positioned to the right of said user's normal head position.

1           18. An automobile audio system for an automobile having a passenger  
2 compartment having a plurality of seats, said audio system comprising:  
3           a first audio signal source having a plurality of output channels, said plurality  
4 including a surround output channel; and  
5           a plurality of substantially identical electroacoustical transducers for radiating  
6 sound waves corresponding to said surround channel;

7           wherein said plurality of electroacoustical transducers are positioned in said  
8 passenger compartment such that each of said plurality of seats are positioned  
9 substantially identically to, and in the direct field of, one of said plurality of  
10 electroacoustical transducers.



4 surround channel signal in the absence of a signal from said second source and to mute  
5 said surround channel signal in the presence of a signal from said second source.

1 24. An automobile sound system in accordance with claim 22, wherein said  
2 second audio source is coupled exclusively to said one of said plurality of transducers and  
3 wherein said one of said plurality of transducers is positioned in a driver's seat.

1 25. An automobile sound system in accordance with claim 22, wherein said  
2 second audio source is coupled exclusively to said one of said first plurality of  
3 transducers and wherein said one of said first plurality of transducers is positioned in a  
4 driver's seat.

1 26. An automobile sound system in accordance with claim 22, wherein said first  
2 audio signal source and said second audio signal source are coupled to said one  
3 transducer by circuitry, and wherein said circuitry is adapted to transmit said surround  
4 channel signal in the absence of a signal from said second source and to mute said  
5 surround channel signal in the presence of a signal from said second source.

1 27. An automobile sound system in accordance with claim 22, further comprising  
2 a second plurality of transducers, wherein said second audio signal source is coupled to  
3 one of said second plurality of transducers.

1 28. An automobile sound system in accordance with claim 27, wherein said first  
2 audio signal source and said second audio signal source are coupled to said one of said  
3 first plurality of transducers and to said one of said second plurality of transducers by  
4 circuitry, and wherein said circuitry is adapted to transmit said surround channel signal in  
5 the absence of a signal from said second source and to mute said surround channel signal  
6 in the presence of a signal from said second source.